

IN THE CLAIMS:

Please replace all previously pending claims with the listing of claims set forth below:

1. (Currently Amended) ~~[[An]]~~ A dental LED operation light, comprising:

at least two power sources (PW), at least one which is an adjustable power source (ADJ-PW), and

at least two LED component units (LG) for emitting light in response to power received from a power source (PW), which LED component units (LG) comprise at least one LED component (LED) and which LED components (LED) have been arranged to produce color components of light emission of said LED operation light at two different wavelengths at least,

wherein at least two of said LED components (LED) emit light of at least two different shades of white, and

wherein said LED operation light additionally comprises:

at least one measuring means (MM) ~~[[for]]~~

i. for measuring the color temperature of the light emission produced by ~~[[the]]~~ said LED component units (LG),

ii. ~~possibly for~~ measuring light reflected from ~~some a~~ surface, or

iii. for measuring ~~[[of]]~~ at least one such magnitude generated by the LED component units (LG) that has a known correlation to the color temperature of the light emission produced by ~~[[the]]~~ said LED component units (LG), and

at least one control means (CM) for generating control information for at least one of ~~[[the]]~~ said adjustable power sources (ADJ-PW) in response to measurement data received from ~~[[the]]~~ said measuring means (MM) to control production of at least one color component in at least one LED component (LED) to maintain a constant or desired color temperature.

2. (Currently Amended) [[An]] The dental LED operation light according to claim 1,
wherein at least one of [[the]] said measuring means (MM) has been arranged to measure intensities of [[the]] said emitted color components.
3. (Currently Amended) [[An]] The dental LED operation light according to claim 1,
wherein at least one [[set]] of ~~the aforesaid~~ said measuring means (MM) has been arranged to measure temperature of [[the]] said LED components (LED).
4. (Currently Amended) [[An]] The dental LED operation light according to claim 1,
wherein
said measuring means (MM) comprise at least one measuring sensor (SE), which has been arranged to output the said measurement data as a measurement signal (MS), and
[[the]] said control means (CM) comprise at least one processor (MP) or logic circuit, which has been arranged to produce [[the]] said control information as a control signal (CS).
5. (Currently Amended) [[An]] The dental LED operation light according to claim 1,
wherein
said LED component unit (LG) comprises a red (R), a green (G) and a blue (B) LED component.
6. (Currently Amended) [[An]] The dental LED operation light according to claim 5,
wherein the light comprises at least two, ~~e.g. three~~ LED component units (LG),
which units comprise a red (R), a green (G) and a blue (B) LED component (LED)
arranged in a row, ~~the~~ said LED component units (LG) being arranged to form a row aligned with ~~the~~ said LED component row.
7. (Cancelled)
8. (Cancelled)

9. (Currently Amended) [[An]] The dental LED operation light according to claim 1,
further comprising at least one adjustable power source (ADJ-PW) for each LED component color to be emitted, each adjustable power source (ADJ-PW) being arranged to supply power to LED components (LED) emitting a given color component.
10. (Currently Amended) [[An]] The dental LED operation light according to claim 9,
wherein said adjustable power sources (ADJ-PW) are integrated with the LED components (LED).
11. (Currently Amended) [[An]] The dental LED operation light according to claim 1,
wherein
said LED component (LED) is a high power LED component whose average input power exceeds 500 mW.
12. (Currently Amended) [[An]] The dental LED operation light according to claim 1,
wherein
one of [[the]] said power sources (PW) is a constant-current source.
13. (Currently Amended) [[An]] The dental LED operation light according to claim 6,
wherein
the light comprises a collimator arrangement (CO) functionally connected to it and aligned with the row formed by [[the]] said LED component units (LG).
14. (Currently Amended) [[An]] The dental LED operation light according to claim 13,
wherein said collimator arrangement (CO) comprises collimators (CO) provided in [[the]] said LED component units (LG).

15. (Currently Amended) ~~[[An]]~~ The dental LED operation light according to claim 1, wherein

the angle (a) between the central rays of the light beams emitted by the outermost LED component units (LG) is at least 5 degrees.

16. (Currently Amended) ~~[[An]]~~ The dental LED operation light according to claim 1, wherein

the aforesaid at least two LED component units (LG) comprise LED components (LED) comprising a lens-reflector component LR (702), the aforesaid measuring means (MM), ~~such as an RGB color sensor,~~ being ~~integrated~~ integrated with the said lens-reflector LR (702) to measure the color component or components emitted from the LED component (LED) in question.

17. (Currently Amended) ~~[[An]]~~ The dental LED operation light according to claim 1, further comprising:

LED components (LED) producing N different color components, N being an integer equal to or higher than two, and adjustable power sources (ADJ-PW) arranged for at least ~~[[−1]]~~ N-1 LED components (LED) producing different color components.

18. (Currently Amended) ~~[[An]]~~ The dental LED operation light according to claim 17, further comprising:

N pieces adjustable power sources (ADJ-PW).

19. (Currently Amended) A method for controlling the color temperature of a dental LED operation light, in which method:

light emission comprising color components of at least two different wavelengths is produced in response to the power supplied by at least two power sources (PW), at least one of which is an adjustable power source (ADJ-PW), to ~~[[a]]~~ at least two LED component ~~unit-units~~ (LG), ~~which LED component units comprise~~ comprising at least one LED component (LED), comprising the steps of:

producing light of at least two different shades of white,

measuring

i. the color temperature of light produced by the LED component units
(LG),

ii. light being possibly reflected from some a surface, or

iii. at least one magnitude magnitude generated by them LED component
units (LG) and having a known correlation to the color temperature of the light
produced by the LED component units (LG), and

producing control information for at least one of ~~the~~ said adjustable power
sources (ADJ-PW) in response to measurement data obtained from ~~the~~ said measurement
to control the production of at least one color component in at least one LED component
(LED) to maintain a constant or desired color component.

20. (Currently Amended) [[A]] The method according to claim 18, wherein

intensity of each emitted color component is measured[[, e.g.]] by measuring
intensities of emissions of LED components producing red, green and blue color
components by means of an RGB color sensor.

21. (Currently Amended) [[A]] The method according to claim 19 wherein

temperature of the LED components (LED), especially temperature of a heat
sink arranged to be shared by [[the]] said components is measured, and production of
color components is controlled in a desired manner on the basis of characteristic
temperature-emission correlation of each of the LED components used.

22. (Currently Amended) [[A]] The method according to claim 19,

wherein emission of at least one of [[the]] said color components is controlled by
means of at least one adjustable power source by connecting at least some of the LED
components (LED) producing the color component in question electrically in series, and
this series to at least one of [[the]] said adjustable power sources, so that the production

of that color component of light changes in response to the adjustment of the said at least one power source.

23. (Currently Amended) [[A]] The method according to claim 19, wherein

LED components producing N different color components are used, N being an integer equal to or higher than two, and the production of at least N-1 color components is controlled.

24. (Currently Amended) [[A]] The method according to claim 23,

wherein the production of N color components is controlled.